

ABSTRACT

An object is to efficiently separate catalyst grains from substantially inert grains and, optionally, separate a plurality of catalyst grains from one another, to thereby efficiently perform catalyst regeneration. After taking a catalyst-containing component containing a solid catalyst component deteriorated in a reaction, out of a fixed-bed reactor, the solid catalyst component is regenerated. If a plurality of components having different shapes from one another are contained as the solid catalyst components, after taking-out step, catalyst component separation step for separating such solid catalyst components from one another is performed and, then, the solid catalyst components are regenerated. Further, if an inert component is contained as the catalyst-containing component, after the taking-out step, an inert component separation step for separating the inert component is performed and then the solid catalyst component is regenerated.